AMENDMENTS TO THE CLAIMS:

1-11. Canceled

12. (Currently Amended) A system for extracting samples from a stream flowing in a conduit, comprising:

a. a probe located in said conduit, said probe including a channel for passing a sample flow from the conduit for analysis;

b. regulating means for controlling the velocity of the sample flow through said probe channel to correspond to the velocity of the stream flowing in the conduit, said regulating means comprising means for generating a feedback signal representing the relative velocities of the stream flowing in the conduit and the sample flow through said probe channel; and

c. a filter for capturing particulate matter, said filter communicating with said probe channel,

wherein said means for generating a feedback signal includes a conduit static pressure measuring means formed in an enclosed path located closely adjacent an external surface of said probe.

13. (Original) The system of claim 12 which additionally comprises a pump, said regulating means feedback signal controlling the pump flow rate of said pump to isokinetically deliver sample from said probe channel to said filter.

14. (Currently Amended) The system of claim 13 in which said means for generating a feedback signal further comprises first pressure measuring means for determining the pressure within said probe channel, ~~second pressure measuring means for determining the pressure in the conduit,~~ and a comparator means for measuring the pressure differential between pressure determined by said first ~~and second~~ pressure measuring means and the conduit static pressure measuring means and for generating a signal representative of said pressure differential.

15. (Original) The system of claim 13 which additionally comprises a condenser communicating with the pump to generate liquid matter from said sample flowing from said probe channel and a dry gas meter communicating with said pump for measuring the volume of gas in said sample flowing from said probe channel.

16. (Currently Amended) An isokinetic sampling system comprising:

(A) a probe that is configured for insertion into a fluid stream, the probe having an interior and an external surface;

(B) an internal pressure ~~tap~~ port that opens into the interior of said probe and that is configured to provide an indication of a static pressure within said probe;

(C) an external pressure ~~tap~~ port that is configured to provide an indication of a static pressure in a portion of the fluid stream that surrounds said probe, said external pressure port being formed into an enclosed path located closely adjacent to the external surface of said probe; ~~and~~

(D) a flow control device that is configured to adjust a fluid flow rate through said probe; and

(E) a controller that is operable to control said flow control device, in response to pressure measurements obtained from said external and internal pressure ~~taps~~ ports, to maintain at least substantially equal static pressures internally of and externally to said probe.

17. (Currently Amended) The sampling system as recited in claim 16, wherein said external pressure port is formed in a tube located on an external surface of said probe.

18. (Currently Amended) An isokinetic sampling system comprising:

(A) a probe that is configured for insertion into a fluid stream, said probe having an interior and an external surface;

(B) an internal pressure port that opens into the interior of said probe and that is configured to provide an indication of a static pressure within said probe;

(C) an external pressure port that is located externally of the external surface of said probe and that is configured to provide an indication of a static pressure in a portion of the fluid stream that surrounds said probe;

(D) a flow control device that is configured to adjust a fluid flow rate through said probe;

(E) a controller that is operable to control said flow control device, in response to pressure measurements obtained from said external and internal pressure taps, to maintain at least substantially equal static pressures internally of and externally to said probe; and ~~The sampling system as recited in claim 16, further comprising~~

F) at least one additional external pressure ~~tap~~ port configured to provide an indication of a static pressure in said portion of the fluid stream.

19. (Currently Amended) The sampling system as recited in claim 18, wherein said external pressure ~~taps~~ ports are arranged relative to one another so as to substantially cancel the effects of any misalignment between the direction of flow in the stream and the orientation of the pressure ~~taps~~ports.

20. (Currently Amended) The sampling system of claim 16, further comprising a differential pressure sensor that is coupled to said external pressure ~~tap~~port, said internal pressure ~~tap~~port, and said controller, said differential pressure sensor generating a signal indicative of a pressure differential between the interior of said probe and the exterior of said probe and transmitting said signal to said controller.

21. (Currently Amended) An isokinetic sampling system comprising:

(A) a probe that is configured for insertion into a fluid stream, said probe having an interior and an external surface;

(B) an internal pressure port that opens into the interior of said probe and that is configured to provide an indication of a static pressure within said probe;

(C) an external pressure port that is located externally of the external surface of said probe and that is configured to provide an indication of a static pressure in a portion of the fluid stream that surrounds said probe;

(D) a flow control device that is configured to adjust a fluid flow rate through said probe;

(E) a controller that is operable to control said flow control device, in response to pressure measurements obtained from said external and internal pressure taps, to maintain at least

substantially equal static pressures internally of and externally to said probe; and ~~The sampling system as recited in claim 16, further comprising~~

F) a dilution tunnel and an exhaust line having an inlet connected to said probe and an outlet opening into said dilution tunnel, ~~and~~ wherein said flow control device comprises a damper that controls an ambient fluid flow rate though said dilution tunnel.

22. (Currently Amended) An isokinetic sampling system comprising:

(A) a probe that is configured for insertion into a fluid stream, said probe having an interior and an external surface;

(B) an internal pressure port that opens into the interior of said probe and that is configured to provide an indication of a static pressure within said probe;

(C) an external pressure port that is located externally of the external surface of said probe and that is configured to provide an indication of a static pressure in a portion of the fluid stream that surrounds said probe; and

(D) a flow control device that is configured to adjust a fluid flow rate through said probe; and

(E) a controller that is operable to control said flow control device, in response to pressure measurements obtained from said external and internal pressure taps, to maintain at least substantially equal static pressures internally of and externally to said probe, ~~The sampling system as recited in claim 16,~~

wherein said flow control device comprises a variable speed pump that is coupled to said probe.

23. (Previously Presented) The sampling system as recited in claim 16, wherein said controller is a closed-loop feedback controller.

24. (Currently Amended) The sampling system as recited in claim 17, wherein said internal pressure ~~tap~~ port is located adjacent a tip of said probe.

25. (Currently Amended) An isokinetic sampling system comprising:

(A) a probe that is configured for insertion into a fluid stream, said probe having an interior and an external surface;

(B) an internal pressure ~~tap~~port that opens into the interior of said probe and that is configured to provide an indication of a static pressure within said probe;

(C) an external pressure ~~tap~~ port that opens into a conduit located on the external surface of ~~that is located on~~ said probe, the external pressure port ~~and that is~~ configured to provide an indication of a static pressure in a portion of the fluid stream that surrounds said probe; ~~and~~

(D) a flow control device that is configured to adjust a fluid flow rate through said probe; and

(E) a controller that is operable to control said flow control device, in response to pressure measurements obtained from said external and internal pressure taps, to maintain at least substantially equal static pressures internally of and externally to said probe.

26. (Currently Amended) An isokinetic sampling system comprising:

(A) a probe that is configured for insertion into a fluid stream, said probe having an interior, an external surface, and a tip;

(B) an internal pressure port ~~tap~~ that opens into the interior of said probe and that is configured to provide an indication of a static pressure within said probe at a location adjacent said ~~a~~ tip of said probe;

(C) an external pressure port ~~tap~~ that is configured to provide an indication of a static pressure in a portion of the fluid stream that surrounds said probe at said location adjacent said tip of said probe; ~~and~~

(D) a flow control device that is configured to adjust a fluid flow rate through said probe; and

(E) a controller that is operable to control said flow control device, in response to pressure measurements obtained from said external and internal pressure ~~taps~~ ports, to maintain at least substantially equal static pressures internally of and externally to said probe.

27. (Currently Amended) A sampling method comprising:

(A) inducting a fluid sample into an interior of a probe disposed in a fluid stream, said probe also having an external surface;

(B) measuring a static pressure of fluid flowing through the interior of said probe;

(C) measuring a static pressure of a portion of the fluid stream surrounding at a location closely adjacent the external surface of said probe; and

(D) based on the static pressure measurements, adjusting a fluid flow rate through said probe to at least substantially eliminate a static pressure differential between the interior and the external surface ~~exterior~~ of said probe.

28. (Currently Amended) The method as recited in claim 27, further comprising determining, based on the measuring steps, a pressure differential between the interior of said probe and the external surface ~~exterior~~ of said probe.

29. (Previously Presented) The method as recited in claim 28, wherein the adjusting step comprises adjusting operation of a flow control device using a closed-loop feedback control scheme.

30. (Currently Amended) The method as recited in claim 29, wherein the adjusting step comprises decreasing a fluid flow rate through said probe if the determined pressure differential is positive, increasing the fluid ~~for~~ flow rate through said probe if the determined pressure

differential is negative, and maintaining the fluid flow rate through the probe at least substantially constant if the determined pressure differential is substantially zero.

31. (Previously Presented) The method as recited in claim 27, further comprising directing fluid from said probe, through an exhaust conduit located at least in substantial part external to said fluid stream, and into a sampling device.